WHAT IS CLAIMED IS

- 1. Site-directed molecular antagonists to SP22 or to functional fragments thereof.
- 2. The site-directed molecular antagonists to SP22 according to claim 1 which are antibodies.
- 3. A method for predicting fertility of a male animal comprising:

assaying sperm from said male animal for levels of SP22 or functional fragments thereof and

relating the amount of SP22 or functional fragments thereof in the sperm to the animal's fertility.

- 4. The method according to claim 3 wherein the male animal is a human.
- 5. The method according to claim 3 wherein the male animal is selected from the group consisting of domestic animals and exotic animals.
- 6. A method for screening for environmental insults to male reproductive competence comprising:

assaying sperm for levels of SP22 or functional fragments thereof, and

relating the amount of SP22 or functional fragments thereof in the sperm to the animal's fertility.

- 7. A method for temporarily rendering an animal sterile comprising administering to said animal an effective amount of a site-directed molecular antagonist to SP22
 - 8. The method according to claim 7 wherein the animal is



- 9. A vaccine for rendering an animal infertile comprising an effective amount of at least one functional fragment of SP22.
- 10. A method for emancing the fertility of a male animal comprising adding to a semen sample or to a subset of sperm an effective amount of SP22 or a functional fragment thereof.
- 11. The method according to claim 10 wherein the male animal is a human.
 - 12. Functional fragments of SP22.

